ASARCO

ENVIRONMENTAL
PROTECTION AGENCY

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December 22, 1998

Susan Zazzali (1 Revised Report)
RCRA Project Manager
Montana Office
U.S. EPA Region VIII
301 South Park, Drawer 10096
Helena, Montana 59626

Gwen Jacobs (3 Revised Reports)
CWA Project Manager
Montana Office
U.S. EPA Region VIII
301 South Park, Drawer 10096
Helena, Montana 59626

Dear Ms. Zazzali and Jacobs:

I am enclosing Asarco's responses to EPA's comments on the Statement of Work (SOW) for the Supplemental Environmental Project (SEP) proposed for the East Helena Plant, along with Michael O. Varner's certification under the East Helena Consent Decree. The enclosure contains Asarco's responses to the specific EPA comments, including the upland inspection document (see response to EPA comment 9), and a revised draft of the SOW that reflects Asarco's responses.

Asarco agrees with EPA that the SEP needs to be integrated into the time line for the RCRA Facility Investigation (RFI). Future investigation and remediation, if necessary, for the areas covered by the SEP should occur during the RFI.

Sincerely,

Jon C. Nickel

Enclosures (2)

cc: Elyana R. Sutin

ASARCO Incorporated, P.O. Box 1230, East Helena, MT 59635
(406) 227-7100
Fax No: (406) 227-8897

CERTIFICATION
PURSUANT TO U.S. v ASARCO INCORPORATED
(CV 98-3-H-CCL, USDC, D. Montana)

I certify under penalty of law that this document, Asarco's responses to comments from the U.S. Environmental Protection Agency (EPA) on the Statement of Work (SOW) for the Supplemental Environmental Project, were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature Michael O. Varner by RC
Name: Michael O. Varner
Title: Vice President
Date: December 21, 1998

Statement of Work for the East Helena Supplemental Environmental Project
Consent Decree Civil Action No. CV 98-3-H-CCL

Asarco Incorporated Responses
To
U.S. Environmental Protection Agency (EPA) Comments, October 28, 1998 (Ref: 8ENF-L)

EPA Comment 1

The SEP needs to be integrated into the time line for the RCRA Facility Investigation (RFI) being done at the East Helena facility pursuant to the above referenced Consent Decree. Contaminated soils remaining in the area should be identified and remediated if necessary prior to implementing either Phase 1 or Phase 2 of the SEP. The Consent Decree indicates that the "any contaminated soils in these areas will be removed as part of the RCRA Corrective Action .. and the SEP shall be implemented in a manner consistent with the completion of the RCRA Corrective Action in the areas of Upper and Lower Lake." (See, p. 60-61 of consent decree). Asarco needs to describe how they will integrate the SEP and RFI activities.

Furthermore, historic sampling results of soils in portions of the area covered by the SEP indicate elevated levels of metals including arsenic and lead (Hydrometrics 1994). It is not clear if these data accurately reflect current conditions because these areas were subsequently disturbed during CERCLA remedial actions conducted at Lower Lake. Contaminated soils remaining in the area should be identified and remediated if necessary prior to implementing either Phase 1 or Phase 2 of the SEP. The current Conditions/Release Assessment Report (CCRA) that Asarco prepared should clarify the extent of data available for this area. If additional soil data is needed, it could be collected as part of the baseline vegetation and wildlife measurements planned as part of the SEP data collection plan, or it could be collected during the RFI (See below).

If Asarco chooses to investigate and remediate the areas covered by the SEP outside of the RFI (that is through implementation of the SEP), soil clean up standards should be developed that are consistent with RCRA requirements to avoid the possibility that Asarco will have to disturb the completed SEP. These issues can be addressed if Asarco agrees to investigate and remediate the areas in a manner that satisfied RCRA corrective action requirements prior to implementing the SEP. Investigation and remediation could occur under the SEP, as an interim measure under the consent decree, or during the RFI.

Asarco Incorporated Response to EPA Comment 1

Asarco agrees that the SEP needs to be integrated into the time line for the RCRA Facility Investigation (RFI) being done at the East Helena facility. Asarco will collect soil data for the SEP site as part of an RFI and subsequently, if necessary, prepare a Work Plan for removal of any contaminated soil from the site. As removal activities could significantly change the scope of work proposed for the SEP, final plans will be delayed until after a determination regarding soil removals has been made. As soon as the impact of this work on the proposed SEP is known, Asarco will prepare a revised SOW that will integrate the SEP with the work resulting from the RFI.

EPA Comment 2

The placement of approximately 1400 cubic yards of fill material will likely require a Clean Water Act Section 404 permit, 33 U.S.C. ▪ 1344, if Asarco intends to discharge fill material in the ponds or redistribute earthen material along the shoreline within the boundaries of waters of the U.S. (See, SOW pp. 1-4, 2-1).

Asarco Incorporated Response to EPA Comment 2

Asarco will ensure that all applicable permits that are required for the SEP are obtained in a timely manner. However, Asarco does not anticipate that a 404 permit will be required for placement of fill into Lower Lake, as described in the SOW. This is because EPA and the Montana Department of Environmental Quality (DEQ) have historically treated Lower Lake as a treatment pond. For example, no 404 permit was required for 1994-1996 Lower Lake dredging. Furthermore, Asarco's NPDES limits are based on discharges from Lower Lake into Prickly Pear Creek, indicating that Lower Lake is considered an Asarco treatment pond.

EPA Comment 3

The SOW does not adequately describe the reasons for the water diversion from Upper Lake to Lower Lake and how it will be operated. The SOW also does not discuss what impacts, if any, this will have on water levels and water quality in both areas. Please describe the necessity and environmental benefit of this structure. (See, SOW pp. 1-6, 2-10).

Asarco Incorporated Response to EPA Comment 3

The water diversion between Upper and Lower Lakes is proposed in the SOW as a potential enhancement that would exceed requirements of the Consent Decree. Section 2 of the SOW has been revised to clarify the benefit of diverting water from Upper to Lower Lake. Asarco suspects water that seeps into Lower Lake through the soil barrier that separates it from Upper Lake of contributing to the water quality of Lower Lake. The diversion under consideration would be designed to increase surface water flow from Upper Lake to Lower Lake, allowing the levels of the two lakes to equalize to some extent. Although the elevation difference between the two lakes is only a matter of a couple feet, any reduction of the hydraulic gradient should decrease the sub-surface flow of water through soils that separate the two lakes. Asarco may proceed with this diversion as part of the SEP effort to improve Lower Lake water quality, vegetation and wildlife habitat, pending further evaluation of possible consequences of the diversion (including hydraulic gradients, water quality, and discharge permitting).

EPA Comment 4

The description of the proposed earthwork needs to be more detailed. For instance, the SOW indicates that slopes will be reduced where they exceed 3:1 in steepness but it does not indicate or show the slopes intended to be graded. Furthermore, EPA is concerned that 3:1 is too steep for development of anything more than a narrow wetland fringe along the shoreline. It is more appropriate to be aiming for 10:1 or 15:1 if Asarco wants to develop an emergent wetland around the shoreline. (See, SOW p. 2-2).

Asarco Incorporated Response to EPA Comment 4

Asarco's goal is not to develop an emergent wetland (requiring 15:1 gradients), but simply a narrow wetland fringe. The slope of fill placed in the water will be closer to 10:1, but the existing banks will be graded to achieve maximum slopes of 3:1 so that grasses can be grown to prevent erosion. An area survey will be required to determine those areas that require grading to flatten bank slopes. Page 2-2 of the SOW has been revised to clarify this goal and to provide more detail of the proposed earthwork.

EPA Comment 5

The SOW does not adequately describe the thickness or design criteria for the "cap" of coversoil that is intended to be placed over the shoreline. It is also unclear whether the SOW plans to topsoil to within 12-18 inches above or below the water line. This could make a difference to the plants in the shallow emergent zone. It could also make a difference with respect to water quality, depending on what is in the soil that would be discharged below the waterline. (See, SOW pp. 2-2, 2-7).

Asarco Incorporated Response to EPA Comment 5

Asarco concurs that additional detail is needed in the SOW to describe the soil cap to be provided on the SEP site. However, the design of the soil cap will be determined by the quality of soil that it covers, which is unknown at this time. Asarco has revised the SOW to explain that a 24-inch cap is proposed for the site, which will consist of a 6-inch capillary break of crushed limestone covered by 18-inches of clean cover soil that is suitable for use as a growth medium for the vegetation that has been proposed for the site. However, Asarco may modify this provision of the SOW depending upon the outcome of an RFI. No matter what the design of the cap is, Asarco proposes for site cover soil to extend into Lower Lake in areas where fill is indicated, but to terminate at least 12 inches above the water line on the Upper Lake side of the site in order to avoid placement of fill into Upper Lake.

EPA Comment 6

EPA is concerned that the 12-inch riprap placed on the shoreline area between the coversoil and water line will not allow for proper growth of vegetation. (See, SOW p. 2-2).

Asarco Incorporated Response to EPA Comment 6

Asarco agrees with EPA's concern and proposes to withdraw this proposed work from the SOW. Although minor erosion is evident around the edge of Lower Lake, it quickly forms a small beach and stabilizes. Page 2-2 of the SOW has been revised to remove riprap from the plan for Lower Lake.

EPA Comment 7

The plantings must be native species planted in a manner that will mimic the nearby native habitats species composition and density. This does not necessarily mean what is presently growing at the site. The SOW should specifically discourage naturalization of "naturalized" non-native nuisance species. Furthermore, where plant materials are being collected for transplanting, EPA requires monitoring of the collection areas to assure that they recover if the collected transplants are large. Small collections, collected within at least 15 feet spacing do not have to be monitored. EPA requires a minimum species survival rate of 70-80% for planted species. (See, SOW, p. 2-5).

Asarco Incorporated Response to EPA Comment 7

SEP plantings will be designed to establish native vegetative cover of composition and density that is comparable to native habitats identified in baseline reference area transects. Non-native and naturalized plant species will not be included in SEP plantings. Text specifically excluding non-native and naturalized plant species from SEP revegetation has been added to SOW Section 2. References to naturalized vegetation that may infer the use of naturalized species have been removed from Section 2 and the Data Collection Plan. Section 3 and the Data Collection Plan of the SOW have been revised to state that, "When 70 percent or greater of native reference area species and cover is observed for two consecutive growing seasons, the SEP areas will be considered successfully revegetated." This corresponds with EPA's comment regarding a minimum species survival rate.

As stated on page 2-5 of the SOW, transplants used in revegetation "will be collected on a low-density, dispersed basis (minimum of 15 feet between collections) throughout accessible portions of the Upper Lake area". This corresponds with EPA's description of small collections which do not have to be monitored. However, page 2-5 has been revised to note that after collection disturbances are seeded for interim cover, the small collection sites will be monitored through the first growing season for cover establishment and noxious weed invasion.

EPA Comment 8

The SOW indicates that prior to revegetation, the area between the lakes will be covered with up to 4-6 inches of suitable coversoil. This seems to imply that it could be a lot less than 4-6 inches. As stated above, without knowing the exact purpose of the cover, the quality of what is underneath it and the quality of the coversoil itself, it is difficult to assess whether or not this is appropriate. (See, SOW p. 2-8).

Asarco Incorporated Response to EPA Comment 8

Asarco concurs with EPA's comment. As stated in the response to comment 5, the design of the soil cap will be determined by the quality of soil that it covers, which is unknown at this time. Asarco has revised the SOW to explain that a 24-inch cap is proposed for the site, which will consist of a 6-inch capillary break of crushed limestone covered by 18-inches of clean cover soil that is suitable for use as a growth medium for the vegetation that has been proposed for the site. However, Asarco may modify this provision of the SOW depending upon the outcome of an RFI, if one is requested by EPA.

EPA Comment 9

The SOW indicates that upland revegetation areas between the lakes and upland inspection sites were identified in January 1997. EPA has not seen the upland inspection sites identified by Hydrometrics. Please provide this information to EPA at your earliest convenience. (See, SOW p. 3-1).

Asarco Incorporated Response to EPA Comment 9

The document with this information (cited in the SOW as Hydrometrics, 1997a) is provided to EPA as Attachment 1.

EPA Comment 10

The Data Collection Plan (DCP) should be more clearly outlined. For instance, it would be helpful to know if the transects in reference areas are intended to cross fairly homogeneous plant communities, or whether they will cross areas that are heterogeneous. This makes a differences, for example, in the plan to disregard species observed in 20% quadrats or less. When there are only 10 quadrats in the sample all it takes is two quadrats to make 20%. If the transect goes from an upland point, across a wetland, to another upland point, the results may be different than if the transect goes across a more homogeneous or uniform area. (See, DCP p.1).

Asarco Incorporated Response to EPA Comment 10

The DCP section (page 1) referenced by EPA in this comment is specific to riparian habitat areas. DCP transects will be located entirely within a given habitat; no transect will cross both upland and riparian habitats. Upland habitat area data collection plans are presented on DCP pages 3 and 4.

EPA Comment 11

The SOW is unclear on whether baseline measurements will be taken in the treatment areas before or after they are disturbed by earthen work. If it is the former, Asarco should expect the trend of the results to be different than it would be if the earth work is done first and then measure a baseline of bare ground. In the first instance, there will be some existing vegetation to start, it will be wiped out, and then hopefully see it turn into something like the applicable reference area. In the second instance, there will be nothing to start and then hopefully it will turn into something like the reference area. (See, DCP, p. 2).

Asarco Incorporated Response to EPA Comment 11

SOW Section 3 and the DCP have been revised to clearly state that baseline measurements will be taken in the treatment areas before the existing vegetation is disturbed by earthwork, including that associated with RCRA Corrective Action or the SEP.

EPA Comment 12

As a general rule, EPA likes to see the data reports tabulate the plant species and NWI indicator status so that it is easier to determine whether or not the hydrophytic vegetation criteria for jurisdictional wetlands have been met.

Asarco Incorporated Response to EPA Comment 12

In reports containing vegetation data, the common name, scientific name, and NWI indicator status will be summarized in an appendix.

EPA Comment 13

EPA has concerns regarding the terrestrial wildlife monitoring provisions. The SOW admits that getting statistically meaningful data from a project this small is difficult. The SOW proposes to collect data only from the treatment areas and not from any reference areas. This means that only general trends of wildlife use within the treatment area will be reported and there will be no indication whether this is better or worse than what was there before and no reference area data to use as a goal to measure progress against. The SEP is intended to have ecological benefits and monitoring these benefits is crucial to the success to the project. (See, DCP p. 5).

Asarco Incorporated Response to EPA Comment 13

Asarco's intent is to collect data from nearby reference areas as well as the treatment areas, so that the measurements of wildlife diversity can be compared. Asarco has revised the Data Collection Plan to clarify this intent. However because the study area is too small to make a valid comparison between it and the reference site, Asarco does not propose to include a quantitative comparison of wildlife use within the SEP area as a criteria for measuring project success.

EPA Comment 14

The SEP Completion Report should also include water quality data. (See SOW p. 4-1).

Asarco Incorporated Response to EPA Comment 14

Asarco is currently gathering water quality data for Lower Lake (as part of the post-RI/FS monitoring plan) and will continue as part of the RCRA Corrective Action and throughout the life of the SEP. As requested, this data will be analyzed and included in the SEP Completion Report. Section 4 of the SOW has been revised to reflect this.

ATTACHMENT 1

Vegetation Habitats and Species Observed
Near the Site of the Asarco East Helena Plant

MEMORANDUM

DATE: January 21, 1997

TO: Project 0764 File

FROM: James Poell, Hydrometrics

SUBJECT: Vegetation Habitats and Species Observed Near the Site of the Asarco East Helena Plant

On January 21, 1997, I visited several sites around the Asarco East Helena smelter facility. The purpose of this visit was to record an impression of vegetative communities in the area of the facility that could be measured for SEP site revegetation plans and as reference areas for SEP success evaluations. Riparian sites were visited on Asarco property to the south and east of the facility (in the area of Upper Lake, Lower Lake, and Prickly Pear Creek). Observations at riparian sites are summarized in Table 1.

Table 1. Riparian Habitats and Vegetation Species Observed in the Upper Lake Area, January 1997

Scrub-Shrub Wetland	
willow	*Salix spp.*
alder	*Alnus spp.*
red-twig dogwood	*Cornus stolonifera*
reed canary grass	*Phalaris arundinacea*
western wheatgrass	*Agropyron smithii*
Emergent Wetland	
cattail	*Typha latifolia*
reed canary grass	*Phalaris arundinacea*
giant wildrye	*Elymus cinereus*
Mesic Shrub	
willow	*Salix spp.*
alder	*Alnus spp.*
Russian Olive	*Elaeagnus angustifolia*
boxelder	*Acer negundo*
woods rose	*Rosa woodsii*
red-twig dogwood	*Cornus stolonifera*
western wheatgrass	*Agropyron smithii*

Upland sites are predominantly cropland, pasture or urban/industrial-impacted in the area around the facility. Relatively undisturbed upland vegetation communities were difficult to locate and

assess, given the time allotted for this visit, the season, and concern for potential trespass on private land. Observations of upland sites were therefore limited to areas around Upper Lake, Lower Lake, and along the public road south of the facility. Those observations are summarized in Table 2.

Table 2. Upland Habitat and Vegetation Species Observed in the East Helena Area, January, 1997

Foothill Grassland	
Russian Olive	*Elaeagnus angustifolia*
boxelder	*Acer negundo*
Rocky Mountain juniper	*Juniperus scopulorum*
bluebunch wheatgrass	*Pseudoroegneria spicata*
thickspike wheatgrass	*Agropyron dasystachyum*
blue grama	*Bouteloua gracilis*
Idaho fescue	*Festuca idahoensis*
needle-and-thread grass	*Stipa comata*
sunflower	*Helianthus annuus*
yarrow	*Achillea millefolium*

A second (and perhaps wider) search for upland sites may be necessary during the growing season, pending a review of Asarco property boundaries and the SEP schedule. Riparian site observations would also be better recorded during the growing season. A noxious weed survey conducted during any further site visits would be helpful in future project weed control planning.